

§ 98.461

waste landfills: Landfills, gas collection systems at landfills, and destruction devices for landfill gases (including flares).

[75 FR 39773, July 12, 2010, as amended at 76 FR 73907, Nov. 29, 2011, 77 FR 51495, Aug. 24, 2012]

§ 98.461 Reporting threshold.

You must report GHG emissions under this subpart if your facility contains an industrial waste landfill meeting the criteria in § 98.460 and the facility meets the requirements of § 98.2(a)(2). For the purposes of § 98.2(a)(2), the emissions from the industrial waste landfill are to be determined using the methane generation corrected for oxidation as determined using Equation TT-6 of this subpart times the global warming potential for methane in Table A-1 of subpart A of this part.

§ 98.462 GHGs to report.

(a) You must report CH₄ generation and CH₄ emissions from industrial waste landfills.

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(b) You must report CH₄ destruction resulting from landfill gas collection and destruction devices, if present.

(c) You must report under subpart C of this part (General Stationary Fuel Combustion Sources) the emissions of CO₂, CH₄, and N₂O from each stationary combustion unit associated with the landfill gas destruction device, if present, by following the requirements of subpart C of this part.

§ 98.463 Calculating GHG emissions.

(a) For each industrial waste landfill subject to the reporting requirements of this subpart, calculate annual modeled CH₄ generation according to the applicable requirements in paragraphs (a)(1) through (a)(3) of this section. Apply Equation TT-1 of this section for each waste stream disposed of in the landfill and sum the CH₄ generation rates for all waste streams disposed of in the landfill to calculate the total annual modeled CH₄ generation rate for the landfill.

(1) Calculate annual modeled CH₄ generation using Equation TT-1 of this section.

$$G_{CH_4} = \left[\sum_{x=S}^{T-1} \left\{ W_x \times DOC_x \times MCF \times DOC_F \times F \times \frac{16}{12} \times \left(e^{-k(T-x-1)} - e^{-k(T-x)} \right) \right\} \right] \quad (\text{Eq. TT-1})$$

Where:

G_{CH₄} = Modeled methane generation in reporting year T (metric tons CH₄).

X = Year in which waste was disposed.

S = Start year of calculation. Use the year 1960 or the opening year of the landfill, whichever is more recent.

T = Reporting year for which emissions are calculated.

W_x = Quantity of waste disposed in the industrial waste landfill in year X from measurement data and/or other company records (metric tons, as received (wet weight)).

DOC_x = Degradable organic carbon for waste disposed in year X from Table TT-1 to this subpart or from measurement data [as specified in paragraph (a)(3) of this section], if available [fraction (metric tons C/metric ton waste)].

DOC_F = Fraction of DOC dissimilated (fraction); use the default value of 0.5.

MCF = Methane correction factor (fraction). Use the default value of 1 unless there is active aeration of waste within the land-

fill during the reporting year. If there is active aeration of waste within the landfill during the reporting year, use either the default value of 1 or select an alternative value no less than 0.5 based on site-specific aeration parameters.

F_x = Fraction by volume of CH₄ in landfill gas (fraction, dry basis, corrected to 0% oxygen). If you have a gas collection system, use the annual average CH₄ concentration from measurement data for the current reporting year; otherwise, use the default value of 0.5.

k = Decay rate constant from Table TT-1 to this subpart (yr⁻¹). Select the most applicable k value for the majority of the past 10 years (or operating life, whichever is shorter).

(2) *Waste stream quantities.* Determine annual waste quantities as specified in paragraphs (a)(2)(i) through (ii) of this section for each year starting with January 1, 1960 or the year the landfills first accepted waste if after January 1,